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The angular diameter at the unit of distance, namely, 9″·38, corresponds to a real diameter of 4332 miles, but this still requires correction for the effect of irradiation. For the determination of the irradiation, Mr. Main proposes to make observations when the disk of *Mars* has become small.

Places derived from Observations of Comet II., 1862, made with the Heliometer at the Radcliffe Observatory, Oxford.

By the Rev. R. Main.

Day, 1862.	Greenwich Mean Solar Time.	Apparent R.A.	Apparent N.P.D.
	h m s	h m s	° ′ ″
Aug. 5	9 47 4·0	6 22 30·07	13 54 8·5
„	10 50 33·6	6 22 47·52	13 52 5·7
7	10 7 18·7	6 41 39·76	12 27 27·6
9	9 29 3·4	7 9 12·24	10 58 10·3
„	9 47 36·3	7 9 29·07	10 57 35·2
„	10 17 8·5	7 9 46·80	10 56 46·9
„	10 31 9·2	7 9 55·67	10 56 8·0
„	10 40 23·4	7 10 2·31	
„	10 48 14·9	7 10 9·44	10 55 46·4
„	11 1 23·2	7 10 18·41	10 55 19·0
14	8 59 7·2	9 42 3·32	8 0 3·3
18	10 55 26·9	12 57 38·98	10 55 12·0
19	11 21 32·6	13 31 51·60	13 13 46·0
22	9 30 26·2	14 35 49·24	21 2 46·9
„	9 49 40·7	14 36 1·31	21 5 3·1
„	10 13 21·2	14 36 16·01	21 8 29·0
„	10 27 41·9	14 36 25·30	21 10 20·3
23	9 47 30·1	14 49 59·60	24 41 36·5
25	9 53 43·8	15 12 9·44	33 14 38·6
29	8 51 22·9	15 36 43·24	54 37 19·8
„	9 11 38·1	15 36 46·05	54 42 30·9
„	9 37 15·2	15 36 52·64	54 48 51·8
„	9 50 20·5	15 36 54·11	54 52 3·7
„	10 8 10·4	15 36 57·17	54 56 17·8
„	10 31 30·1	15 37 2·18	55 1 46·9

Assumed Mean Places of the Stars employed for Comparison.

Day of Obs.	Star's Name.	Mean R.A. 1862, Jan. 1.	Mean N.P.D. 1862, Jan. 1.
		h m s	° ′ ″
Aug. 7	B.A.C. 2210	6 39 53·16	12 51 22·0
9	B.A.C. 2210		
„	Radcliffe 1928	7 11 28·81	11 2 20·5

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Day of Obs.	Star's Name.	Mean R.A. 1862, Jan. 1.	Mean N.P.D. 1862, Jan. 1.
		h m s	° ′ ″
Aug. 14	Groomb. 1643	10 21 35·42	8 47 50·2
18	B.A.C. 4527	13 25 49·48	10 38 35·1
19	Oeltz. Arg. 13813	13 30 39·48	13 13 45·5
22	Groomb. 2129	14 28 33·63	21 18 31·1
25	Groomb. 2211	15 10 2·56	33 21 57·2
29	Piaz. xv. 148	15 33 28·78	54 52 20·2

The observations in general consisted of distinct readings of the hour-circle, and the declination circle corresponding to distinct transits and bisections of the Comet, and the comparison-stars, except on August 9, when the transits of the star and Comet were made with an unchanged position of the polar axis, the objects being in the field of the telescope together.

The results on August 5 and 23 are more doubtful than the rest through want of a comparison-star.

The observations to August 14, inclusive, were made by myself; after that time they were made by Mr. Quirling.

Observations of Comet II. 1862, taken with the Equatoreal of the Liverpool Observatory. By J. Hartnup, Esq.

1862.	G.M.T.	Comet's R.A.	Log. $\frac{p}{P}$	Comet's N.P.D.	Log. $\frac{q}{P}$	Stars of Comp. B.A.C.
	h m s	h m s		° ′ ″		
Aug. 18	8 11 55·9	12 53 13·87	+9·309	10 48 14·0	+8·2211	4527
18	8 57 3·3	12 54 25·25	+9·323	10 51 20·6	−8·9740	,,
18	9 42 8·7	12 55 36·51	+9·321	10 54 28·6	−9·3168	,,
21	9 57 5·7	14 18 44·38	+9·107	17 55 10·8	−9·3093	4909
21	10 37 31·9	14 19 17·06	+9·110	18 0 14·4	−9·3688	,,
23	8 11 41·9	14 49 11·09	+8·864	24 26 13·6	+8·1605	4949
23	8 26 47·7	14 49 19·24	+8·887	24 28 41·1	−7·7688	,,
23	8 41 54·3	14 49 26·93	+8·905	24 31 4·4	−9·3188	,,
28	9 12 11·0	15 31 41·35	+8·656	48 53 23·1	−9·6022	5122
28	9 32 12·7	15 31 45·58	+8·676	48 58 11·9	−9·6345	,,
28	9 52 14·6	15 31 50·10	+8·693	49 3 1·1	−9·6655	,,
Sept. 10	10 27 23·6	16 8 0·19	+8·514	108 46 30·4	−9·9433	6060

The observations are corrected for refraction. The corrections to be applied for parallax in time, and are represented by *p* and *q*. P is the equatoreal horizontal parallax.

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